

REMARKS

Claims 1, 2, and 4-22 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claim 2 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed. Notwithstanding, claim 2 is amended to recite that the coating layer is also the insulating layer.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Pat. No. 5,731,856). This rejection is respectfully traversed.

Notwithstanding, independent claim 1 is amended. As amended, claim 1 calls for an overcoat layer of an inorganic substance covering the first electrode and the aluminum electrode. However, claim 1 also recites that the overcoat layer is omitted from an area where the first electrode is connected to the driver IC, an area where the aluminum electrode is connected to the driver IC, and an area where the aluminum electrode is connected to the second electrode. Inasmuch as these areas are free of the overcoat layer, electrical conduction is ensured. Kim fails to teach or suggest the

claimed arrangement of the overcoat layer. Rather, Kim is subject to the overcoat layer causing non-conduction among the various components.

Claim 2 is rewritten in independent form. As amended, claim 2 calls for the inorganic substance covering the aluminum electrodes to also be the insulating layer. In contrast, Kim teaches a protective layer 124 and a separate, discrete insulating layer 114. See column 11, lines 20-23. Although Kim employs an “insulating material” for the protective layer 124, Kim still requires a separate insulating layer 14. In so doing, Kim teaches away from the claimed arrangement. One skilled in the art would not be provided with the requisite suggestion or motivation to provide the claimed protective layer as the insulating layer in view of Kim’s teachings to the contrary. The claimed arrangement eliminates the need for a separate insulating layer. As such, Kim cannot render obvious the subject matter of Claim 2.

Claim 3 is cancelled.

Regarding claims 4-12, applicant respectfully submits that these claims are non-obvious in view of Kim for at least the same reasons as set forth above with respect to base claim 1. Furthermore, applicant respectfully submits that the specific claimed arrangements are not notoriously well known in the art.

Claim 13 calls for an overcoat layer of an inorganic substance covering the aluminum electrodes except in an area where the aluminum electrodes are connected to the driver IC, and an area where the aluminum electrodes are connected to the second electrode. In this way, the overcoat layer does not interfere with the electrical interconnection and conduction among these components. In contrast, Kim’s overcoat layer can interfere with electrical interconnection and conduction among the various components.

With respect to claims 14-18, applicant respectfully submits that these claims are non-obvious in view of Kim for at least the same reasons as set forth above with respect to base claim 13. Furthermore, the specific claimed arrangements are not notoriously well known in the art.

NEW CLAIMS

New claims 19-22 are added. Claim 19 is similar to claim 1. Claim 20 is similar to claim 13.

Claim 21 calls for a sol-gel reacted inorganic substance covering the aluminum electrodes. In contrast, Kim discloses a protective layer 124 layer "deposited" on the surface of the substrate 110. See column 11, lines 15-25. The very broad disclosure of "deposited" is insufficient to teach or suggest a sol-gel reacted coating as claimed. Furthermore, one skilled in the art would not find a sol-gel reacted coating obvious in view of the teachings of Kim since Kim is completely silent on the desired "deposited" technique. There must be some teaching or suggestion in the prior art of the claimed subject matter. In this case, there is none.

Claim 22 calls for an overcoat layer of titanium oxide, zirconium oxide and silicone oxide covering the aluminum electrodes. In contrast, Kim teaches a protective layer 124 of nitride. See column, lines 15-17. One skilled in the art would not find the claimed materials obvious in view of Kim's teaching regarding nitride since the claimed materials provide very different physical properties as compared to nitride. As such, Kim provides no suggestion or motivation to modify its teachings to arrive at the claimed invention.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (Amended) A liquid crystal device comprising:

a first substrate having a first face, said first substrate being provided with a first electrode;

a second substrate [pair of substrates, each] having [an opposing] a second face opposing [each other with] said first face of said first substrate, said second face being provided with a second electrode;

a liquid crystal interposed between said first and second faces [therebetween, the opposing faces being provided with electrodes];

a protruding portion [provided on] of said first substrate [one of said pair of substrates] protruding outwardly relative to said second [toward the outside from the other] substrate, said first electrode extending from an area where said first and second substrates oppose each other to said protruding portion;

a driver IC mounted on said protruding portion, said first electrode electrically connected to said driver IC;

an aluminum electrode[s] formed on said first substrate [the protruding portion], [and] said aluminum electrode[s] electrically [connected with said electrodes] connecting said driver IC and said second electrode; and

an overcoat layer of an inorganic substance covering said first electrode and said [the] aluminum electrode[s], said overcoat layer being omitted from an area where said first electrode is connected to said driver IC, an area where said aluminum electrode is connected to said driver IC, and an area where said aluminum electrode is connected to said second electrode.

2. (Amended) [A liquid crystal device according to Claim 1, further comprising] A liquid crystal device comprising:
a pair of substrates, each having an opposing face opposing each other with liquid crystal interposed therebetween, the opposing faces being provided with electrodes;
a protruding portion provided on one of said pair of substrates protruding toward the outside from the other substrate;
aluminum electrodes formed on the protruding portion, and said aluminum electrodes electrically connected with said electrodes;
an overcoat layer of an inorganic substance covering the aluminum electrodes;
and
an insulating layer covering the electrodes formed on one of said pair of substrates, wherein the overcoat layer further comprises [is formed as the same layer as] the insulating layer.

13. (Amended) A liquid crystal device comprising:
a first substrate having a first face;
a first electrode on said first face;
a second substrate having a second face opposite said first face;
a second electrode on said second face;
liquid crystal interposed between said first and second faces;
a protruding portion of said first substrate protruding outboard of said second substrate;
aluminum electrodes formed on the protruding portion and connected to said first and second electrodes; and
an overcoat layer of an inorganic substance covering the aluminum

electrodes except in an area where said aluminum electrodes are connected to said driver IC, and an area where said aluminum electrodes are connected to said second electrode.